Robert Speare

150 West 84th Street, Apt. 3A
10024 New York
USA
+1 (929) 215 5122
robert.speare@gmail.com
rspeare.blogsplot.com

'I use software, statistics, and a growing amount of intuition to solve business problems. Motivated, positive, and task-oriented teammate. Meritocratic – I am not inclined to lead but will lead by example.'

Education

2014–2015 **Physics Ph.D. (incomplete)**, *New York University*, New York, NY, .
Advisor: Roman Scoccimarro
Focus: Statistical Field Theory and Cosmology

2007–2012 **Physics BA**, *Princeton University*, Princetion, NJ, .
Advisor: Richard Gott III
Thesis: Horizon Run III: Topology as a Standard Ruler

Experience

2015– **Deployment Strategist**, *Palantir Technologies*, New York, NY, .
Working as half software engineer, half mathematician and half consultant, I have:
- Worked with a Large U.S. Retailer to prioritize loyalty accounts and salesforce attention
- Helped large bank optimize their Asset Liquidity Management, using Big Data, software and sophisticated but simple statistics
- Built forecasting models at very large scale using an STL (seasonal, trend, residual) framework
- Designed optimized pricing and risk tools (both algorithms and UI) for Financial processors and Healthcare firms

2014–2015 **Teaching Assistant**, *New York University*.
- Statistical and Thermal Physics (Spring 2015)
- General Physics I (Fall 2014)

2012–2014 **Global Academic Fellow, Physics**, *New York University Abu Dhabi*.
- Teaching:
  - Electromagnetism, Classical Mechanics, Quantum Mechanics, Special relativity and Statistical Physics;
- Research:
  - Perturbation theory – The generation of non-Gaussianity through nonlinear gravity.
  - Topology of random fields: Isodensity curvature as a measure of cosmic scale.
  - Information theory, Bayesian inference and Monte Carlo methods.

2013–2014 **Visitor at the NYU Center for Cosmology and Particle Physics**.
Working with Roman Scoccimarro (NYU) and Richard Gott III (Princeton)
on various research projects [see below].

Web Presence and Interests

Website <rspeare.github.io>
A centralized repository for my blog, github, twitter, and linkedin accounts.

Blog <rspeare.blogspot.com>
A mathematics and research diary.

Pet projects Stochastic Gradient descent methods, Gaussian Processes, Stochastic Calculus and Decision Theory

Programming Languages

Code Bash, C,C++, Fortran, Python, Java, Pyspark, Scala, R, javascript, Html

Other Mathematica, Matlab, git, Subversion

Languages

Spanish **Conversant** *Once fluent*

Publications

- **Robert Speare**, Roman Scoccimarro, Emiliano Sefussati. "Fast Calculation of the SPT Bispectrum". In preparation.
- **Robert Speare**, J. Richard Gott, Juhan Kim and Changbom Park. "Horizon Run 3: Topology as a Standard Ruler". Published in Astrophys.J. 799 (2015) 2, 176. arXiv:1310.4278
- Prachi Parihar, Michael Vogeley, J. Richard Gott, Yun-Young Choi, Juhan Kim, Sungsoo S. Kim and **Robert Speare**. "A Topological Analysis of Large Scale Structure Studied Using the CMASS Sample of SDSS-III". Published in Astrophys.J. 796 (2014) 2, 86

Leadership

- Captain of the Princeton Track and Cross Country Teams.